

Unpublished report prepared for the Michigan Natural Features Inventory. 20 pp.
Pennell, F.W. 1935. The Scrophulariaceae of eastern temperate North America. Monograph I. Academy of Natural Sciences. Philadelphia. 650 pp.

Author

The primary author of this proposed rule is Margaret T. Kolar, U.S. Fish and Wildlife Service, 1405 S. Harrison Road, East Lansing, Michigan 48823 (517/337-6650 or FTS 374-6650).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Fish, Marine mammals, Plants (agriculture).

Proposed Regulation Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1543; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under Scrophulariaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

• • • • •
(h) • • •

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Scrophulariaceae—Snapdragon family:						
<i>Mimulus glaberratus</i>	Michigan	U.S.A.	E		NA	NA
var. <i>michiganensis</i>	Monkey-flower	(MI)				

Dated: September 14, 1989.

Bruce Blanchard,

Acting Director, Fish and Wildlife Service.

[FR Doc. 89-23057 Filed 9-29-89; 8:45 am]

BILLING CODE 4310-55-M

50 CFR Part 17

RIN 1018-AB31

Endangered and Threatened Wildlife and Plants; Proposal To Determine Threatened Status for the Puritan Tiger Beetle and Endangered Status for the Northeastern Beach Tiger Beetle

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine threatened status for the Puritan tiger beetle (*Cicindela puritana*) and endangered status for the northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*), two shore-dwelling beetles of the family Cicindelidae. The former was known historically from the Connecticut River in New Hampshire, Massachusetts and Connecticut, and from along the Chesapeake Bay in Maryland; it is now restricted to Maryland and one site in Massachusetts. The latter once occurred commonly along coastal beaches from Cape Cod Massachusetts, to central New Jersey and along the Chesapeake Bay, from Calvert County, Maryland, south; it is now evidently extirpated north of Maryland. Both tiger beetles are threatened by rapid human population

increase and development in the areas they occupy. Population and range reductions undergone by both make them more prone to chance extinctions; more vulnerable to the effects of winter storms, predators, and parasites; and less able to recolonize areas previously occupied. This proposal, if made final, will implement protection provided by the Endangered Species Act of 1973, as amended, for these beetles. Critical habitat is not proposed. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by December 1, 1989. Public hearing requests must be received by November 16, 1989.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Annapolis Field Office, U.S. Fish and Wildlife Service, 1825 Virginia Street, Annapolis, Maryland 21401. Comments and materials will be available for inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Judy Jacobs at the above address or by telephone (301/269-5448).

SUPPLEMENTARY INFORMATION:

Background

Tiger beetles (genus: *Cicindela*) are day-active, predatory insects that capture small arthropods in a "tiger-like" manner, grasping prey with their mandibles (mouthparts). Tiger beetle larvae, which live in permanent burrows in the ground, are also voracious predators, fastening themselves by

means of abdominal hooks near the tops of the burrows and rapidly extending from their burrows to seize passing invertebrate prey. Over 100 species and many additional subspecies of tiger beetles occur in the United States (Boyd 1982). Because of their interesting behavior and variety of forms and habitats, tiger beetles have received much study; a journal devoted exclusively to these beetles, "Cicindela," has been published since 1969. The Puritan tiger beetle (*Cicindela puritana*) and the northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*), both associated with beach habitats, have until recently received little ecological study.

The Puritan tiger beetle is brownish-bronze above with a metallic blue underside and measures under 11.5 mm (½-inch) in total length. Each elytron (wing cover) is marked with narrow marginal and transverse white bands. It is distinguished from more common, similarly marked tiger beetles by the uneven or minutely broken edges of the middle band (Glaser 1984). Originally described by G. Horn (1876), *C. puritana* was later considered a subspecies of *Cicindela cuprascens* (Leng 1902, Horn 1930) and a subspecies of *Cicindela macra* (Vaurie 1951). Most recently, Willis (1967) established separate species status for these three taxa. The range of *C. puritana* is separated by several hundred miles from the overlapping ranges of *C. macra* and *C. cuprascens*.

Historically, the Puritan tiger beetle occurred in scattered localities along the Connecticut River in Connecticut, New

Hampshire, and Massachusetts, and along the Chesapeake Bay in Calvert and Kent Counties, Maryland. The reasons for this disjunct distribution are unknown. However, its habitat in both areas is similar, characterized by the presence of narrow sandy beaches with adjacent, well-developed bluffs of sand and clay (Glaser 1984, Knisley 1987). The Puritan tiger beetle has a full one-year life cycle. In Maryland, adults are first seen in mid-June. Their numbers peak in early July and begin to wane by late July. Collection records from New England indicate a pattern similar but shifted about two weeks later (Knisley 1987). The newly emerged beetles feed and mate along the beach area. After mating, females move up onto the cliffs to deposit their eggs. Emerging larvae construct burrows in the cliffs. Knisley found larval burrows in moist areas of sandy clay cliffs adjacent to the beaches where the adults were found and along the back areas of these beaches. Statistical analysis of habitat features indicated that the presence of well-developed, sparsely vegetated cliffs as oviposition (egg-laying) sites is more important for this beetle than is the quality of adjacent beaches (Knisley 1987).

Most New England collection records for the Puritan tiger beetle were from the period 1900 to 1920, with the most recent collection in 1939 (Knisley 1987). Subsequent vigorous collection attempts were unsuccessful, leading to the belief that the Puritan tiger beetle was likely extirpated in New England. In July of 1986, however, a population of the Puritan tiger beetle was discovered in Hampshire County, Massachusetts, on a small island in the Connecticut River and on a sandy beach several hundred meters to the south. No other Connecticut River populations have since been discovered, despite intensive search (Knisley 1987, Nothnagel 1987). The decline of this species in New England is most likely due to habitat destruction, particularly of larval habitat. This is further discussed under Factor A below.

South of New England, the Puritan tiger beetle is restricted to a 26-mile stretch of the Chesapeake Bay in Calvert County and a recently discovered population in Kent County, Maryland. Status survey work in Calvert County during the breeding season, when adults are active, conducted in 1985 and 1986 by B. Knisley (1987), revealed five large populations (600+ individuals) and four small populations (100 or fewer individuals). However, great fluctuations in numbers may occur from year to year. Tiger beetle

populations in Calvert County are potentially threatened by human encroachment into their habitat, as detailed below.

The northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*), described as *C. dorsalis* by Say (1817), has white to light tan elytra, often with fine dark lines, and a bronze-green head and thorax. It is somewhat larger than the Puritan tiger beetle, measuring 13 to 15.5mm ($\frac{1}{2}$ to $\frac{3}{4}$ inch) in total length.

Cazier (1954) considered *C. dorsalis* and three other previously described species as subspecies of the single species *C. dorsalis*. Boyd and Rust (1982) determined that these four taxa are clearly distinguishable. Recent morphological analyses and breeding experiments indicate that *C. dorsalis* is most likely a full species (B. Knisley, Randolph Macon College, pers. comm. June, 1987). Until this information is published, however, it is most appropriate to continue to refer to this taxon as a subspecies.

Historically, the northeastern beach tiger beetle occurred on sandy beaches from Cape Cod, Massachusetts south to central New Jersey and along the Chesapeake Bay of Maryland and Virginia. Early records indicate the abundance of this beetle on the northeast coast. Leng (1902) states that it occurred "in great swarms in July" from Martha's Vineyard south to New Jersey. Boyd (1978) cites many references, mostly from the 19th century, indicating the species' abundance in New Jersey. It was also common along the beaches of Rhode Island and Long Island, New York (Knisley 1987).

Between 1920 and 1950, the number of collections of the northeastern beach tiger beetle dropped precipitously (Knisley *et al.* 1987). Stamatov (1972) noted that northeastern beach tiger beetles were declining, and had possibly disappeared from New York and New Jersey. He suggested that this decline might be associated with increasing vehicular traffic along the beaches. He did report the existence of a breeding population at Block Island, Rhode Island. This is the most recent record of a northeastern beach tiger beetle population north of Maryland. Extensive surveys and information collected by Knisley (1987) indicate that the northeastern beach tiger beetle is now extirpated north of Maryland. Furthermore, only 19 extant populations are known to exist within the Chesapeake Bay area of Maryland and Virginia, and eight of these are considered "marginal" due to low population numbers (Knisley, pers. comm., April, 1989).

Unlike the larvae of the Puritan tiger beetle, northeastern beach tiger beetle larvae occupy burrows directly on the beach, in and above the high-tide zone. Rearing experiments (Stamatov 1972) and field observations by Knisley indicate these beetles have a full two-year life cycle, over-wintering twice as larvae, pupating at the bottoms of their burrows and emerging as winged adults during their third summer. Adults emerge from early June through August, with peak abundance in mid-July. Adults forage mostly in the damp sand of the intertidal zone and apparently scavenge on dead fish and invertebrates for much of their diet (Knisley 1987). Habitat characteristics significantly correlated with the presence of northeastern beach tiger beetles include large beach size (length and width), high degree of exposure (dynamic beaches), fine sand particle size and low human and vehicle activity (Knisley 1987).

The northeastern beach and Puritan tiger beetles were first recognized by the Service in the **Federal Register** Notice of Review published on May 22, 1984. That notice, which covered invertebrate wildlife being considered for classification as endangered or threatened, included these two beetles in Category 2. Category 2 comprises those taxa for which listing is possibly appropriate, but for which existing information is insufficient to support a proposed rule. In response to the publication of this notice, the Service received comments from the American Entomological Society expressing their view that the northeastern beach tiger beetle clearly qualified for endangered status, and that the status of the Puritan tiger beetle was questionable. The lack of available biological data on these taxa was also noted. Accordingly, in 1985, the Service contracted with Dr. Barry Knisley to conduct status survey work on these two beetles. Dr. Knisley's final report to the Service (Knisley 1987) provides much of the biological basis for this proposed listing action. The **Federal Register** Notice of Review published on January 6, 1989, included these two beetles in Category 1, indicating that the Service now possesses sufficient information to support the appropriateness of proposing to list them.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 153 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (50 CFR Part 424) set forth the procedures for adding species to the Federal Lists.

Species may be determined to be endangered or threatened due to one or more of the five factors described in Section 4(a)(1). These factors and their application to the Puritan tiger beetle (*Cicindela puritana*) and northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*) are as follows:

A. The present or threatened destruction, modification, or curtailment of their habitat or range. Although it was once abundant in New England, the northeastern beach tiger beetle is now extirpated from all of its former range north of Maryland. This dramatic range contraction has been attributed primarily to the impacts of human and vehicle activities on beaches (Stamatov 1972, Boyd 1978, Knisley 1987). Northeastern beach tiger beetle larvae are particularly vulnerable to direct crushing or repeated compaction of their burrows by vehicles and heavy human use for two reasons. First, they occur in the intertidal zone (as opposed to Puritan tiger beetle larvae which burrow on cliffs or back beaches) and are therefore unavoidably in the path of beach users and their vehicles. Secondly, due to their prolonged life cycle, these beetles must pass through two summers in their vulnerable larval stage.

The significant impact of vehicles on this beetle is illustrated by a study of the related *Cicindela dorsalis media*, which Dr. Knisley conducted on Assateague Island in 1985. Adults (and larvae) were found only on the northern 2-mile section of the island where vehicles were restricted and human activity light. No beetles were found on the remaining 10-12 miles of beach, including the State Park portion and the southern portion in Maryland where off-road vehicle activity is heavy. But, just below the state line in Virginia, where vehicles are prohibited, adult beetles could again be found. A study of the northeastern beach tiger beetle presently underway in Maryland is yielding similar results; the abundance of larval tiger beetles is inversely correlated with the amount of human traffic that an area receives (Knisley, pers. comm., 1989). Southern Maryland and coastal Virginia are developing rapidly. Visible signs of development in Calvert County, Maryland are the widening of Routes 2-4 in the southern part of the county, development of a state park at Flag Ponds and creation and expansion of numerous housing developments. A private campground now occurs at one of Virginia's largest beetle population beaches, and several "planned community" developments have been proposed near other large populations

on the Eastern Shore. Development of the Virginia's eastern shore threatens to be so rapid and haphazard that a citizens' group has been formed to try to bring some order to potential development. Such development results in increased human activity on the beaches, as well as construction of marinas and increased use of bulkheads and other structures that may eliminate or alter beaches.

Pollution and alteration of the intertidal beach areas are also potential threats to these beetles. Spills of oil or other pollutants that reach the shore could be lethal to the tiger beetle larvae directly, or indirectly, by interfering with their feeding behavior or diminishing their prey base. Dredge spoil material placed on beaches could also destroy larvae directly.

In contrast to northeastern beach tiger beetles, Puritan tiger beetle larvae burrow on beachside cliffs and back beaches, where they are less susceptible to direct impacts of human and vehicular traffic or other perturbations of intertidal habitat. However, this species has not escaped the effects of habitat degradation, particularly where it occurred along the Connecticut River. A total of 17 dams have been built along the Connecticut above Hartford, very likely inundating some Puritan tiger beetle populations and decreasing water flow necessary for habitat maintenance at others. The Connecticut has also been seriously polluted by effluent from pulp and paper mills and other factories and by inputs of raw sewage (McCarry 1972). Efforts over the past several decades to clean up this river have been largely successful, and may permit reestablishment of tiger beetle populations in some areas of previous extirpation (Tanner 1988). Cliff stabilization is another form of habitat alteration affecting the Puritan tiger beetle today. Continual erosion and breakdown of the cliffs, from wave action and rainfall, is necessary to create the newly exposed areas needed for oviposition and larval development. Construction of bulkheads and growth of kudzu or other introduced vegetation on cliffs curtails this erosive process and renders the cliffs unsuitable for the larvae. In Massachusetts, bank stabilization and urbanization along the Connecticut River have eliminated much potential tiger beetle habitat (Nothnagel 1987).

B. Overutilization for commercial, recreational, scientific or educational purposes. It is no exaggeration to state that tiger beetles (genus *Cicindela*) are the most highly sought-after by amateur collectors of all beetle genera.

Additionally, tiger beetles are frequently used as model organisms in physiological and ecological studies. In fact the genus *Cicindela* may be the subject of more intense collecting and study than any other single insect genus. This interest in tiger beetles is reflected in the publication since 1969 of a journal devoted exclusively to this genus.

At present, collecting pressure on adult beetles is not believed to be contributing to the decline of these species; threats to larval survival appear to outweigh any threats to adults. However, the proposed listings of these beetles as endangered and threatened could increase their desirability and perceived value to collectors.

C. Disease or predation. These tiger beetles are not known to be susceptible to any diseases that would threaten their survival; however, two insects known to be natural enemies have been commonly observed in their habitat. Adults of the wingless wasp, *Methocha*, were found at several population sites. Female *Methocha* attack and paralyze tiger beetle larvae, then lay a single egg on the beetle larva, so that their own larva may use the beetle for a food source as it develops. This parasitoid may account for significant tiger beetle mortality. Robber flies (family Asilidae) were also seen commonly at most sites visited by Knisley (1987). These predatory flies perch and wait for adult tiger beetles or other flying prey and capture them out of the air. Ten unsuccessful attacks of robber flies on northeastern beach tiger beetles were observed during status survey work (Knisley 1987). Normally, these predators and parasitoids, which evolved in conjunction with the tiger beetles, would not pose a severe threat to the survival of their host (or prey) species, since this would, in the long run, threaten their own survival. However, this natural balance has been altered by habitat degradation, as mentioned in factor A, and now these natural enemies may in some cases pose significant threats to the beetles' survival.

D. The inadequacy of existing regulatory mechanisms. The Puritan and northeastern beach tiger beetles are both classified as endangered under Maryland state law, and their take is prohibited, except as permitted for scientific research. While this lends some protection to individual beetles, it does not adequately protect the larval beetles' habitat. These beetles are not presently protected under Virginia's Endangered Plant and Insect Protection Act, but if they are Federally listed, they will be automatically added to the state

list. This law also provides protection from taking, but does not regulate habitat alteration. While both tiger beetles are on the state "Endangered" list in Massachusetts, the state Endangered Species Act has not yet been approved by the legislature. However, the beetles and their habitat are protected in Massachusetts under the Wetlands Protection Act, which requires permit applicants to consider the requirements of listed species in their project plans.

E. Other natural or man-made factors affecting their continued existence. Severe flooding may have contributed to the near extinction of the Puritan tiger beetle from the Connecticut River system. New England's worst floods occurred in 1927 and 1936, at about same the time collection records for this species became non-existent (Knisley 1987). These intensive floods likely inundated the adult beetles' beach habitat and/or stripped off portions of riverside cliffs where the larvae occurred.

Populations of both tiger beetle species normally experience very high larval mortality and dramatic year-to-year variations in abundance and local extinctions, due to factors such as flood tides, hurricanes, winter storms and other natural phenomena. A series of nearby or contiguous populations is probably necessary to reestablish populations that have been locally depleted or extirpated. Both decrease in habitat size and number of populations make it difficult for beetles to recover from population declines caused by natural or human-related factors. Small habitat size supports a smaller population with a greater probability of extinction. Gradual elimination or disruption of adjacent habitats eliminates the source of beetles for recolonization of extirpated population sites. This problem has apparently been more severe from New Jersey to Massachusetts, where climatic conditions for the beetles are less favorable and human pressures on habitats greater.

The Service has carefully assessed the best scientific and commercial information regarding past, present and future threats faced by these species in determining to propose this rule. Based on this evaluation, the preferred action is to list the northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*) as endangered and the Puritan tiger beetle (*Cicindela puritana*) as threatened. The northeastern beach tiger beetle has been extirpated from a significant portion of its range along the northeast coast of the U.S.; its prolonged larval stage and the

location of larvae in the intertidal sands, in the path of human and vehicular traffic, render this beetle very vulnerable to local extinction through habitat destruction. Threatened status would not accurately reflect the status of this beetle, whose remaining habitat is undergoing rapid development. This same area is also the stronghold of remaining Puritan tiger beetle habitat. However, the Puritan tiger beetle appears somewhat less vulnerable to direct habitat disruption because its larval burrows are located in less accessible areas. Furthermore, certain areas along the Connecticut River where this beetle has been extirpated may be suitable for recolonization. Therefore, threatened status seems most appropriate for this species.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for these species at this time. As mentioned in Factor B above, tiger beetle specimens are considered very valuable to collectors. Publication of maps detailing the specific locations of these beetles would increase the probability of their being over-collected, especially at sites containing smaller populations. Protection for these species and their habitats will be addressed through application of the jeopardy standard and through the recovery process. On balance, the threat of over-collection as a result of designation of critical habitat would outweigh any benefit of such designation. Therefore, it is not prudent to determine critical habitat for these beetles at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions

against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a proposed species. If a species is subsequently listed, Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Private developers who are working without any Federal permits other such authorizations or monies, will be unaffected under this rule with respect to Section 7(a), but would be subject to restrictions against take, as specified in Section 9 of the Act and implementing regulations.

The U.S. Army Corps of Engineers (Corps) has jurisdiction over much of the area inhabited by these tiger beetles. Projects possibly affecting the beetles would include dredge spoil disposal, beach erosion control, marina construction, and other developments affecting beach areas. Other Federal agencies that could possibly be affected if these beetles are listed would include the U.S. Coast Guard, National Marine Fisheries Service, Soil Conservation Service and other agencies conducting or overseeing projects in coastal areas or along the Connecticut River.

At present, the only Federal projects or permitting actions known to the Service that could affect these beetles include several minor spoil disposal operations, a Corps beach stabilization project at Long Beach, Maryland and a proposed campground facility on Virginia's lower eastern shore. The Corps is aware of this proposed listing and is working with the Service to avoid any adverse impacts to the beetles associated with these projects.

The listing of these beetles would also bring Sections 5 and 6 of the Endangered Species Act into full effect in their behalf. Section 5 authorizes the acquisition of lands for the purpose of conserving endangered and threatened species. Pursuant to Section 6, the Service would be able to grant funds to affected states for management actions

aiding the protection and recovery of the beetles.

Listing these tiger beetles as threatened and endangered would provide for development of a recovery plan (or plans) for them. Such plan(s) would bring together both State and Federal efforts for conservation of the beetles. The plan(s) would establish an administrative framework, sanctioned by the Act, for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan(s) would set recovery priorities and estimate the cost of various tasks necessary to accomplish them. They would assign appropriate functions to each agency and a time frame within which to complete them. They would also identify specific areas that need to be monitored and possibly managed for the beetles.

The Act and implementing regulations found at 50 CFR 17.21 for endangered species and 17.21 and 17.31 for threatened species set forth a series of general prohibitions and exceptions that apply to all endangered or threatened wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, transport in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce, any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that was illegally taken. Certain exceptions can apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered and threatened animal species under certain circumstances. Regulations governing permits are at 17.22, 17.23, and 17.32. Such permits are available for scientific purposes to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. For threatened species there are also permits for zoological exhibition, educational purposes or other purposes consistent with the purposes of the Act. Further information regarding regulations and requirements for permits may be obtained from the U.S. Fish and Wildlife Service, Office of Management Authority, Permits Branch, P.O. Box 3507 Arlington, VA 22203-3507 (703/358-2104).

Public Comments Solicited

The Service intends that any final action resulting from this proposal be as accurate and effective as possible in the conservation of endangered or threatened species. Therefore, any

comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of this proposal are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial or other relevant data concerning any threat (or the lack thereof) to these tiger beetles;

(2) The location of any additional populations of Puritan tiger beetles or northeastern beach tiger beetles and the reasons that any habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;

(3) Additional information concerning the range and distribution of these beetles; and

(4) Current or planned activities in the subject areas that may impact these beetles;

Final promulgation of the regulations on these species will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests must be made in writing (see ADDRESSES section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to Section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

- Boyd, H. P. 1978. The tiger beetles (Coleoptera: Cicindelidae) of New Jersey, with special reference to their ecological relationships. *Trans. Amer. Entomol. Soc.* 104:191-242.
- Boyd, H. P. 1982. Checklist of Cicindelidae. The tiger beetles. Plexus Publ., Marlton, N.J.
- Boyd, H.P. and R. W. Rust. 1982. Intraspecific and geographic variation in *Cicindela dorsalis* Say (Coleoptera: Cicindelidae). *Coleopt. Bull.* 36:221-239.
- Cazier, M. A. 1954. A Review of the Mexican tiger beetles of the genus *Cicindela* (Coleoptera: Cicindelidae). *Bull. Amer. Mus. Nat. Hist.* 103(3): 231-307.
- Glaser, J. D. 1984. The Cicindelidae (Coleoptera) of Maryland. *Md. Entomol.* 2(4): 65-76.
- Horn, G. 1876. The sexual characters of North American Cicindelidae with notes on some groups of *Cicindela*. *Trans. Amer. Entomol. Soc.* V:232-240.
- Horn, W. 1930. Notes on the races of *Onius californicus* and a list of the Cicindelidae of America north of Mexico (Coleoptera). *Trans. Amer. Entomol. Soc.* 56:73-86.
- Knisley, B. 1987. Final Report: Status survey of two candidate tiger beetles, *Cicindela puritana*. G. Horn and *C. dorsalis* Say. Submitted to USFWS, Region 5, 2/10/87, 20+ pp.
- Knisley, B., J. I. Luebke and D. R. Beatty. 1937. Natural History and population decline of the coastal tiger beetle, *Cicindela dorsalis dorsalis* Say (Coleoptera: Cicindelidae). *Virginia J. Sci.* 38(4): 293-303.
- Leng, C.W. 1902. Revision of the Cicindelidae of boreal America. *Trans. Amer. Entomol. Soc.* 28:93-186.
- McCarthy, C. 1972. Yesterday lingers along the Connecticut. *Nat. Geogr.* 142:334-69.
- Nothnagel, P. 1987. *Cicindela puritana*.—The Puritan Tiger Beetle: Its current status in Massachusetts. Unpubl. Rept. to Mass. Nat. Heritage Prog., 15pp.
- Stamatov, J. 1972. *Cicindela dorsalis* endangered on northern Atlantic coast. *Cicindela* 4:78.
- Tanner, O. 1988. Of tiger beetles and wedge mussels: protecting Connecticut River riches. *The Nature Conserv. Mag.* 38(5):4-11.
- Vaurie, P. 1951. Five new species of tiger beetles of the genus *Cicindela* and two corrections. (Coleoptera, Cicindelidae). *Amer. Mus. Novitates*. No. 1479:1-12.
- Willis, H. L. 1967. Bionomics and zoogeography of tiger beetles of saline habitats in the central United States (Coleoptera: Cicindelidae). *Univ. Kans. Sci. Bull.* 47:143-313.

Author

The primary author of this proposed rule is Judy Jacobs, Annapolis Field Office, U.S. Fish and Wildlife Service, 1825 Virginia Street, Annapolis, Maryland 21401 (301) 269-5448.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Fish, Marine mammals, Plants (agriculture).

Proposed Regulation Promulgation

Part 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1543; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2. It is proposed to amend Section 17.11(h) by adding the following, in alphabetical order under Insects, to the

List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

(h)

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Insects:							
Beetle, northeastern beach tiger.	<i>Cicindela dorsalis dorsalis</i> ..	U.S.A. (CT, MA, MD, NJ, NY, PA, RI, VA).	NA	E	NA	NA
Beetle, Puntan tiger	<i>Cicindela puritana</i>	U.S.A (CT, MA, MD, NH, VT).	NA	T	NA	NA
.

Dated: September 13, 1989.

Richard N. Smith,

Acting Director, Fish and Wildlife Service.

[FR Doc. 89-23058 Filed 9-29-89; 8:45 am]

BILLING CODE 4310-55-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 650

[Docket No. 90524-9228]

RIN 0648-AC44

Atlantic Sea Scallop Fishery

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Proposed rule.

SUMMARY: NOAA issues this proposed rule for comment on Amendment 3 (Amendment) to the Fishery Management Plan for the Atlantic Sea Scallop Fishery (FMP). The Amendment proposes that: (1) All sea scallop dredge vessels and all vessels landing more than 5 bushels (176.2 L) of sea scallops in the shell must offload all fish (as defined in 50 CFR 620.2, which includes sea scallops) within a specified 12-hour offloading period; and (2) all other vessels landing more than 40 pounds (18.1 kg) of shucked scallops must offload all sea scallops within a specified offloading period. The proposed 12-hour offloading periods are as follows:

State of offloading	Period
ME, NH, NC, SC, GA, and FL	7 a.m. to 7 p.m.
MA, RI, and CT	5 a.m. to 5 p.m.
NY, NJ, DE, MD, VA, PA	6 a.m. to 6 p.m.

A mechanism for modifying offloading periods is also proposed. The Amendment is intended to improve

compliance with the meat count/shall height standards of the FMP and to enhance the efficiency and effectiveness of NMFS enforcement efforts in the Atlantic sea scallop fishery.

DATE: Comments on the proposed rule must be received on or before November 16, 1989.

ADDRESSES: Comments on the proposed rule should be sent to Richard Roe, Regional Director, National Marine Fisheries Service, Northeast Regional Office, One Blackburn Drive, Gloucester, MA 01930. Mark the outside of the envelope "Comments on the Scallop Regulations."

Copies of the amendment, the environmental assessment, and the regulatory impact review (RIR) are available from Douglas G. Marshall, Executive Director, New England Fishery Management Council, Suntaug Office Park, 5 Broadway, Saugus, MA 01906.

FOR FURTHER INFORMATION CONTACT: Patricia A. Kurkul, Resource Policy Analyst, Plan Administration Branch, NMFS Northeast Regional Office, 508-281-9331.

SUPPLEMENTARY INFORMATION:

Background

The FMP was developed by the New England Fishery Management Council (Council) under the authority of the Magnuson Fishery Conservation and Management Act (Magnuson Act), as amended, 16 U.S.C. 1801 *et seq.*; it was approved by the Secretary of Commerce (Secretary) and implemented by final regulations effective August 13, 1982 (47 FR 35990). The FMP has been amended three times—twice by the Council and once by the Secretary. Amendment 1 became effective November 6, 1985 (50 FR 46069); a Secretarial Amendment superseding Amendment 1 became effective January 14, 1987 (52 FR 1462); and Amendment 2 became effective June 23, 1988 (53 FR 23634). Amendment 3 and proposed regulations for its

implementation were initially submitted by the Council to the Secretary for review on April 7, 1989. Upon review of the Council's proposed regulations by NOAA General Counsel and NMFS Enforcement Northeast Region, it was determined that strict enforcement measures would be necessary for effective implementation of Amendment 3. Under authority of section 304(a)(1)(D)(i) of the Magnuson Act, as amended, 16 U.S.C. 1854(a)(1)(D)(i), the proposed regulations submitted by the Council were changed to explain more fully the scope of Amendment 3 and the enforcement measures necessary for its implementation; a proposed rule was published on May 19, 1989 (54 FR 21640). Because the changes made in the first submission of Amendment 3 broadly applied offloading restrictions to all sea scallop permit holders, the Council voted on May 24, 1989 to withdraw the Amendment from further Secretarial review. A notice of withdrawal of Amendment 3 was published on June 30, 1989 (54 FR 27656). After further development of the implementing regulations and consultation with NMFS, the Council resubmitted Amendment 3 for Secretarial Review on August 18, 1989.

The principal objective of the FMP is to maximize over time the joint social and economic benefits from the sea scallop resource. Sub-objectives to achieve this goal are: (1) Restoration of adult stock abundance and age distribution in order to reduce the year-to-year fluctuations in stock abundance caused by variation in recruitment; and (2) enhancement of yield per recruit for each stock.

The primary management measure used to achieve these objectives is the requirement that scallops harvested must, on average, meet a 30 meats per pound standard (30 meat count standard) for shucked sea scallops, with a corresponding 3½-inch (8.9 cm) shell height standard for sea scallops landed